

# Windbreak and Air Quality

**Location:** Central Pennsylvania

**Category:** Partnerships for Conservation  
Science Research/Information/Education

## **The Resource Challenge**

What can be done to minimize the conflicts between residential landowners living near (within 300' in some instances) a concentrated animal operation? There are problems both real and perceived with odors, flies, noise, dust, visual impairment, and normal agricultural activities. There is information on the effects of windbreaks from the Midwest that needs to be adapted to the east where space is limited. Several agencies are working with concentrated animal operations and these efforts need to be put together in a conservation system to address all problems. This includes composting, nutrient management, mortality disposal, and conservation planning as related to air quality management.

A group was organized to establish several windbreak demonstration sites to evaluate potential benefits for windbreaks and air quality. Initially, we were dealing with poultry operations but expanded to all concentrated animal operations.

### ***Key Innovation***

Windbreak Education and Research



*This residential Community is approximately 500' from the poultry house*

## **Key Participants**

Penn State Cooperative Extension Service

Penn State Department of Horticulture

Penn State Department of Poultry Science

Pennsylvania Bureau of Forestry

Volunteers – (Penn State University Students & private citizens)

USDA – Natural Resources Conservation Service (Pennsylvania)

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Big Flats Plant Material Center

Wenger Feeds (Private Industry)

Berks Conservation District

Agriculture Producers



*Hybrid Poplar rooted cuttings planted in 2003*



*After 2 growing seasons, most of these hybrid poplars were 12' - 15' tall.*

## **Results and Accomplishments**

Established 15 demonstration sites on Poultry (chicken & turkey), Dairy, and Swine operations

Studying the value of fast growing species such as hybrid Poplar and willows to establish a visual screen in 2-3 years

Studying the use of Streamco willow as an air filter and a living snow fence

Evaluating the effects of trees to absorb ammonia, dust, and other pollutants

The educational value of a visual screen for “out of site, out of mind” use.

A Field Day is planned for June 14, 2005 for Agricultural producers to see all phases of a conservation system including air quality.

## **Contacts**

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